Amendments to the Claims

Please amend the claims to read as follows.

1. (Original): An optical switch, comprising:

first and second optical arrays separated by an interface, said first array comprising a first optical fiber comprising an endface angled at an angle greater than a total internal reflection angle of the optical fiber material and said second array comprising a second optical fiber comprising an endface angled at an angle greater than a total internal reflection angle of the second optical fiber material, said second fiber endface facing said first fiber endface to provide a gap between the endfaces of the fibers; and

a support structure upon which said optical arrays are mounted, said support structure including an area which has a flexing profile that differs from the remainder of said support structure, said support structure capable of flexing at said area ~~wherein the operation of force on said support structure serves~~ to change the size of the gap to optically couple and de-couple said optical arrays.

2. (Currently Amended): The optical switch of claim 1, wherein said first optical array includes a first chip ~~and a~~ comprising said first optical fiber, and said second optical array includes a second chip ~~and a~~ comprising said second optical fiber, said first and second chips being mounted on said support structure.

3. (Original): The optical switch of claim 2, wherein each said chip includes a groove, said optical fibers being mounted within said grooves.

4. (Original): The optical switch of claim 1, wherein said support structure comprises a flex plate and said area comprises a trench.

5. (Currently Amended): ~~The optical switch of claim 4,~~ An optical switch, comprising:

first and second optical arrays separated by an interface; and

a support structure upon which said optical arrays are mounted, said support structure including an area which has a flexing profile that differs from the remainder of said support

structure, wherein the operation of force on said support structure serves to optically couple and de-couple said optical arrays and wherein said support structure comprises a flex plate and said area comprises a trench and wherein said optical arrays are mounted on said flex plate such that said trench is positioned beneath said interface.

6. (Original): The optical switch of claim 4, wherein said trench has a smooth sidewall.

7. (Currently Amended): ~~The optical switch of claim 4, further comprising:~~ An optical switch, comprising:

first and second optical arrays separated by an interface comprising one or more grooves located on said arrays ~~chips~~;

a support structure upon which said optical arrays are mounted, said support structure including an area which has a flexing profile that differs from the remainder of said support structure, wherein the operation of force on said support structure serves to optically couple and de-couple said optical arrays, said support structure comprising a flex plate and said area comprising a trench;

a plurality of grooves located on said flex plate, wherein said optical arrays are mounted on said flex plate such that said grooves on said arrays ~~chips~~ mate with respective said grooves on said flex plate; and

a plurality of spheres positionable within said grooves on said arrays ~~chips~~ and said flex plate.

8. (Currently Amended): The optical switch of claim 7, wherein one said groove on said arrays ~~chips~~ is elongated relative to the other said grooves, said elongated groove allowing movement of one of said optical arrays relative to the other of said optical arrays prior to mounting of said optical arrays on said flex plate.

9. (Original): The optical switch of claim 4, wherein said flex plate includes an etch stop layer.

10. (Original): An optical switch, comprising:

first, second and third optical arrays, wherein said third optical array is interposed between said first and second optical arrays, said first and third optical arrays are separated by a first interface, and said second and third optical arrays are separated by a second interface;

a support structure upon which said first, second and third optical arrays are mounted, said support structure including a pair of areas which each have a flexing profile that differs from the remainder of said support structure; and

fourth and fifth optical arrays, wherein said fourth optical array is positioned transverse to said first and third optical arrays in the vicinity of said first interface and said fifth optical array is positioned transverse to said second and third optical arrays in the vicinity of said second interface.

11. (Original): The optical switch of claim 10, wherein said optical arrays each include an optical fiber mounted on a chip.

12. (Original): The optical switch of claim 11, wherein each said chip has a groove, said optical fibers being mounted in said grooves.

13. (Original): The optical switch of claim 10, wherein said support structure comprises a flex plate and said areas each comprise a trench.

14. (Original): The optical switch of claim 13, wherein said flex plate includes an etch stop layer.

15. (Original): The optical switch of claim 13, wherein said first, second and third optical arrays are mounted on said flex plate such that one said trench is positioned beneath said first interface and the other said trench is positioned beneath said second interface.

16. (Original): The optical switch of claim 15, wherein said optical arrays are capable of selective optical coupling with one another.

17. (Original): The optical switch of claim 16, wherein forces directed in certain directions and at certain locations of said flex plate optically couple said first, second and third optical arrays together.

18. (Original): The optical switch of claim 16, wherein forces directed in certain directions and at certain locations of said flex plate optically couple said first and fourth optical arrays together.

19. (Original): The optical switch of claim 16, wherein forces directed in certain directions and at certain locations of said flex plate optically couple said second and fifth optical arrays together.

20-28. (Canceled).

29. (New) The optical switch of claim 1, wherein said flexing profile is configured to permit said fiber endfaces to move proximate to one another to substantially close said gap.

30. (New) The optical switch of claim 1, wherein said flexing profile is configured to permit said fiber endfaces to move proximate to one another to close said gap.

31. (New) The optical switch of claim 1, wherein said flexing profile is configured to permit said fiber endfaces to move towards one another in a direction along the optical axis of at least one of said fibers.

32. (New) The optical switch of claim 1, wherein said fiber endfaces are parallel to one another.

33. (New) The optical switch of claim 5, wherein said first array comprises a first optical fiber comprising an endface angled at an angle greater than a total internal reflection angle of the optical fiber material and said second array comprises a second optical fiber comprising an endface angled at an angle greater than a total internal reflection angle of the second optical fiber material, said second fiber endface facing said first fiber endface to provide a gap between the endfaces of the fibers.

33. (New) The optical switch of claim 7, wherein said first array comprises a first optical fiber comprising an endface angled at an angle greater than a total internal reflection angle of the optical fiber material and said second array comprises a second optical fiber comprising an endface angled at an angle greater than a total internal reflection angle of the second optical fiber material, said second fiber endface facing said first fiber endface to provide a gap between the endfaces of the fibers.

35. (New) The optical switch of claim 10, wherein said optical arrays each comprise an optical fiber, each fiber comprising an endface angled at an angle greater than a total internal reflection angle of the optical fiber material.